AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-33. (Cancelled)

34. (Currently Amended) A method for forming a layer on at least a portion of a surface of a biocompatible medical device, the method comprising:

dissolving an anionic polysaccharide in aqueous solution and complexing it with a quaternary ammonium cation in the solution to form a polysaccharide complex between the cation and the polysaccharide, with the complex precipitating from the solution;

recovering the precipitate,

dissolving the precipitated polysaccharide complex in an organic solvent,

covalently attaching a plurality of vinylic monomers to the complex in the organic solvent to thereby form a polysaccharide macromer,

contacting the surface of the medical device with a plurality of the ~~synthetic anionic~~ polysaccharide macromers, ~~polymers, with the polysaccharide polymers having an average length of at least two polysaccharides covalently bonded per polymer, to form the layer wherein the polysaccharide polymers are formed by chemically reacting polysaccharide complexes in an organic solvent, the polysaccharide complexes comprising quaternary ammonium cations ionically bound to the polysaccharides and at least one functional group capable of forming a covalent bond~~

and polymerizing the vinylic groups of the polysaccharide macromers in solution to form a covalently-crosslinked hydrogel in contact with the surface and having a thickness of at least 50 microns.

35-38. (Cancelled)

39. (Original) The method of claim 34 wherein the polysaccharide is an O-MPSAC.

40. (Cancelled)

41. (Currently Amended) The method of claim 34 wherein the polysaccharide macromers ~~polymers~~ further comprise a ~~second~~ functional group for forming a covalent bond after the hydrogel ~~layer~~ is formed.

42. (Currently Amended) The method of claim 41 wherein the ~~first and/or second~~ functional group is a photoactivatable group.

43-48. (Cancelled)

49. (Previously Presented) The method of claim 34 wherein the organic solvent has a boiling point at atmospheric pressure of less than approximately 115 degrees Centigrade and a dielectric constant that is less than that of DMSO.

50-56. (Cancelled)

57. (Currently Amended) The method of claim 34 wherein the polysaccharide macromers are polymerized ~~polymers are formed~~ in the presence of a solubilized a non-polysaccharide polymer.

58-60. (Cancelled)

61. (Currently Amended) The method of claim 34 wherein the polysaccharide macromer ~~polymer~~ comprises a cross-linked structure or a branched structure.

62-63. (Cancelled)

64. (Currently Amended) The method of claim 34 wherein the polysaccharide macromer ~~polymer~~ is covalently bonded to the surface.

65. (Currently Amended) The method of claim 34 wherein the hydrogel ~~polysaccharide polymer~~ is bound to the surface through electrostatic interactions.

66. (Currently Amended) The method of claim 34 wherein the polysaccharide complex, after polymerization to form the hydrogel, is covalently bonded to the surface and further comprising exposing the covalently bonded polysaccharide complex to a salt solution to decomplex the quaternary ammonium cations from the polysaccharide bound to the surface.

67. (Previously Presented) The method of claim 34 wherein the quaternary ammonium cation is chosen from the group consisting of cetyltrimethylammonium chloride, dodecyldimethylbenzylammonium chloride, benzalkonium chloride, didecyldimethylammonium chloride, benzethonium chloride, hexyl trimethyl ammonium, decyl trimethyl ammonium, lauryl trimethyl ammonium, myristyl trimethyl ammonium, cetyl trimethyl ammonium, stearyl trimethyl ammonium, didecyl dimethyl ammonium, dilauryl dimethyl ammonium, and distearyl dimethyl ammonium and wherein the organic solvent comprises at least one member of the group consisting of dimethylformamide, dimethylacetamide, dimethyl sulfoxide, hexamethylphosphoric triamide, formic acid, acetonitrile, methanol, ethanol, acetone, acetic acid, dichloromethane, pyridine, and formamide.

68.-94. (Cancelled)

Please add the following new claims:

95. (New) The method of claim 34 wherein the surface comprises a knitted fabric tube.

96. (New) The method of claim 95 further comprising placing the knitted fabric tube over a mandrel, placing the polysaccharide macromer in contact with the fabric, polymerizing the macromer to form the hydrogel to encapsulate the fabric tube, and removing the hydrogel from the mandrel.

97. (New) The method of claim 95 further comprising placing the knitted fabric tube in a mold and polymerizing the polysaccharide macromer to form the hydrogel to encapsulate the fabric tube.

98. (New) The method of claim 34 wherein the polysaccharide comprises heparin, with the hydrogel comprising at least about 60% water content.

99. (New) The method of claim 97 wherein the hydrogel comprises at least 80% heparin by dry weight of the total hydrogel.

100. (New) The method of claim 34 wherein the hydrogel is at least about 500 microns thick.

101. (New) The method of claim 34 wherein the polysaccharide macromer is mixed with a synthetic macromer that is polymerized with the polysaccharide macromer to form part of the hydrogel.

102. (New) The method of claim 99 wherein the synthetic macromer comprises polyethylene glycol.

103. (New) The method of claim 99 wherein the synthetic macromer comprises polyvinylpyrrolidone.

104. (New) The method of claim 34 wherein the vinylic monomer is an acrylate or a methacrylate.